

Curriculum Vitae

Name: Allan Masumi Nishimura

Citizenship: U.S.A. **email:** nishimu@westmont.edu

Telephone: Business (805) 565-6188 **fax:** 805-565-7066
Home (805) 682-2088

Education: University of California, Berkeley: B.S., 1968, Chemistry
University of California, Davis: Ph.D., (D.S.Tinti, mentor) 1972, Physical Chemistry
University of California, Berkeley: Postdoctoral Fellow, (C.B.Harris, mentor) 1972-1973

Professional Experience: Assistant Professor of Chemistry, 1973-1978
Associate Professor of Chemistry, (tenured) 1978-81
Wichita State University, Wichita, Kansas
Associate Professor of Chemistry 1981-83
Professor of Chemistry, (tenured) 1983 to present
Chair, Department of Chemistry (1990-2004)
Westmont College, Santa Barbara, California

College honors: Teacher of the year: 1998
Faculty Research Award: 1986
Title: distinguished professor: 2003

External honor: University of California Davis Prize "for outstanding contribution to undergraduate mentoring in chemical research" - 2004

Externally Funded Research Proposals:

American Chemical Society: Petroleum Research Fund Type G (2843) "Picosecond Laser in the Study of Ultrafast Photochemical Reactions" 1973-1977.

American Chemical Society SEED Program.Funded \$2,500 summers of 1975-77.

Public Health Service, National Institutes of Health (GM21770) "The Study of the Excited Electronic State of Flavins," Project period 1975-80, funded \$84,317.

National Science Foundation: "A Study of Energy Transfer in Proteins" Project period 1979-80, funded \$4,600.

American Chemical Society: Petroleum Research Fund PRF# 13938-B6 "Coherence in the Phosphorescent Triplet State of Multiple Localized States in 1,4-dichloronaphthalene," Project period 1983-1984, funded \$13,000.

Research Corporation: "A Study of the Orientation of Quinoxaline on the Surface of A Single Crystal of Alumina by Optically Detected Magnetic Resonance" Project period: 1984-1985, funded \$10,400.

American Chemical Society: Petroleum Research Fund, PRF #16979-B6-C, "Coherence in Orientationally Disordered Crystals" Project period:1985-1987, funded \$15,000.

Research Corporation: "A Study of the Orientation of Quinoxaline on the Surface of a Single Crystal of Alumina by Optically Detected Magnetic Resonance" Project period:1986-1987, Funded: \$12,000.

National Science Foundation: Research Opportunity Award. Research conducted at Stanford University. Period: 1988-1989. Funded: \$10,000.

American Chemical Society: Petroleum Research Fund, PRF #20460-B5-C "Adsorbed Molecules on Thin Metal Films" Project period:1988-1991, Funded \$20,000.

American Chemical Society: Project Catalyst and The County Superintendent of Schools. (Summer Research for Economically Disadvantaged). Project period, summer 1989. Funded \$1,800. Participant: Graciella Reynoso, Santa Barbara High School

Research Corporation: "A Study of Molecules Adsorbed on Smooth and Roughened Thin Silver Films" Project period: 1989-1990, Funded: \$12,500.

American Chemical Society: Project SEED I and the Santa Barbara County Summer Youth Employment and Training Program, The County Superintendent of Schools. Project period, summer 1994. Funded \$2,500. Participant: Bobbie Oudinarath, Dos Pueblos High School.

The American Physical Society: Laser Science Topical Group. "Geometry of Interfacial Molecules" Summer stipend for undergraduate research. Participant: Kathleen Purvis. Project period: summer 1994, Funded: \$3,000

American Chemical Society: Project SEED II and the Santa Barbara County Summer Youth Employment and Training Program, The County Superintendent of Schools. Project period, summer 1995. Funded \$2,500. Participant: Bobbie Oudinarath, Dos Pueblos High School.

American Chemical Society: Petroleum Research Fund, "Triplet-Triplet Energy Transfer of Adsorbed Organic Species" Project period: 1994-1996, Funded: \$25,000

American Chemical Society, Petroleum Research Fund, "Temperature Dependent Nonradiative Processes in Adlayer Molecules" Project period: 2002-2005, Funded: \$50,000.

The John Stauffer Charitable Trust – (in conjunction with Office of College Advancement) Equipment for Teaching Laboratories \$400,000. Project period: 2003-2004.

The Ahmanson Foundation – (in conjunction with Office of College Advancement) Equipment for upper division teaching laboratories \$150,000. Project period: 2004-2005.

The Research Corporation – The Cottrell College Science Award “A study of water-halobenzene clusters on $\text{Al}_2\text{O}_3(0001)$ surface by emission and cavity ringdown spectroscopy.” Project period: 2004-2006, Funded: \$36,218.

Pending Proposal:

American Chemical Society - Innovative Projects Grant: Awards for Teacher and Student Participating in the U.S. National Chemistry Olympiad. Project period: 2005, Requested: \$1700.

Professional Offices held:

Chair of the *California Los Padres Section of the American Chemical Society*-elected for 2003.

Program chair for the *California Los Padres Section of the American Chemical Society* 2002.

Executive board for the *California Los Padres Section of the American Chemical Society* 2004

Treasurer for the *Western Spectroscopy Association* whose international/national research meetings are held yearly at the Asilomar Conference Grounds in Pacific Grove, CA. Just a year ago, celebrated the 50th year anniversary meeting. I was on the executive board as treasurer for 1999-2004

Positions held that impact K-12 education:

National Chemistry Week activities coordinator for the local ACS section: 1990-present. This task involves organizing the ACS student affiliate groups from Westmont College and UC Santa Barbara, and adults from local industry to have them promote the National Chemistry Week activities at local shopping malls: La Cumbre and Paseo Nuevo. Children K-12 have been participants in the activities we provide for NCW.

United States National Chemistry Olympiad, coordinator for local ACS section, 1998-present. Over the years, about 100-150 students take the local section exam, and out of that group, two from area high schools are selected to take the national exam which is composed of multiple choice, free response and a lab practical. The exam has involved over 12 high schools and their chemistry teachers.

Participant as a teacher in the Cal SOAP (California Student Opportunity and Access Program), a program that targets at risk primarily Hispanic junior high and middle

school students (1998-present) coordinated by the Santa Barbara City College. During the summer, the Cal SOAP students have a scholastic camp in which I have been doing the “a evening in the chemistry lab” two nights and “Mr. Wizard” one night with success. The classes are attended by about 40-45 junior high students.

Science Project Judging at a high school in Atascadero (1996-present). I have coordinated the judging of the science fair at an area high school that involves judging about 100 projects.

Positions held that impact undergraduate chemistry programs:

20th Annual Southern California American Chemical Society (ACS) Undergraduate Research Conference, coordinator, 2001. I was the conference coordinator for the Southern California section that involved about 10 area colleges and universities. About 40 undergraduate students participated in this event.

37th ACS Western Regional Meeting - Undergraduate Research Symposium coordinator. During the ACS WERM of 2001, I was the conference coordinator that involved over 30 papers and about 40 undergraduate students.

8th Annual Westmont College Undergraduate Research Symposium coordinator (2004). This involved about 20 posters presented by about 40 students. I will be doing this again in 2005.

Publications in Undergraduate Chemical Education: (undergraduate co-authors underlined)

1. Scott A. Riley, Leonard S. Fifield, and A.M.Nishimura “An Inexpensive Photon Counter Interface for the Personal Computer”, *J. Chem Ed.* 74, 1243 (1997)
2. Scott A. Riley, Nathan R. Franklin, Bobbie Oudinarath, Sally Wong, David Congalton and A.M.Nishimura “Measurement of Evaporation Rates of Organic Liquids by Optical Interference” *J. Chem. Ed.* 74 1320 (1997).
3. Scott A. Riley, Leonard S. Fifield, K. A. Martin, and A. M. Nishimura, “A Program to Determine the Percent Total Deuteration in an Exchange Reaction” *Chem. Edu.*, 1997, V2(No 5): S1430-4171(1997)05144-2.
4. Scott A. Riley and A.M. Nishimura “A PC Interface for a Single Ratio Stepper Motor” *Chem. Edu.* V3, No.3, 03207-6 (1998).
5. Scott A. Riley, Alison Noble, Jonathan Crabb, Travis Walkup, Douglas Jones and A. M. Nishimura “A Variation of the Speed of Sound Experiment” *Chem. Edu.*, V3, N.4, (1998).

6. Ian M. Rosbrugh, S. Y. Nishimura, and A. M. Nishimura "Evaporation Kinetics in Short Chain Alcohols by Optical Interference." *J. Chem. Ed.* **77**,1047-1049 (2000)
7. D.L.Arnold, R.T.Gingerich, C.D.Emerson, T.P.Ludwick, A.D.Ribbens, J.A.Santos, J.D.Taylor, A.Nudelman, and A.M.Nishimura "Quasi-Adiabatic Evaporation of Liquids on a Glass Surface as Observed by Optical Interference" *Chem. Edu.***8**, 1-4 (2003).
8. Robert. Broadus, Dustin Carroll, Tyler Conant and A.M.Nishimura "Stand-Alone Microcontroller Incorporated Photon Counter" to be submitted to *Chem. Edu.*

Research Publications (undergraduate co-authors are underlined):

1. A. M. Nishimura and J. S. Vincent, "Microwave and Optical Detection of Electron Spin Resonance in the Triplet State of 1,8-Naphthyridine," *Chem. Phys. Lett.* **13**, 609 (1971).
2. A. M. Nishimura, D. S. Tinti and J. S. Vincent, Phosphorescence Microwave Double Resonance Studies of 1,3- 1,5-,and 1,8-Diazanaphthalenes," *Chem. Phys. Lett.* **12**, 360 (1971).
3. A. M. Nishimura and J. S. Vincent, "Optically Detected Electron Spin Resonance Studies of 1-Indanone and α -Tetralone," *Chem. Phys. Lett.* **13**, 89 (1972).
4. A. M. Nishimura and J. S. Vincent, "Optical Detection of Electron Spin Resonance in the Triplet State of 1,5-Naphthyridine," *Mol. Cryst. and Liq. Cryst.* **17**, 197 (1972).
5. A. M. Nishimura and D. S. Tinti, "Correlation of the Zero Field Splittings with the Phosphorescence Rate Constants and Vibronic Activity in the Lowest Triplet State of Benzaldehydes by ODMR," *Chem. Phys. Lett.*, **13**, 278 (1972).
6. A. H. Francis, C. B. Harris and A. M. Nishimura, "Phosphorescence Properties of the Phosphorescent State of 1,2,4,5-Tetrabromobenzene as Determined by Optically Detected Magnetic Resonance," *Chem. Phys. Lett.* **14**, 425 (1972).
7. A. M. Nishimura, A. H. Zewail, and C. B. Harris, "Zero Field Optically Detected Magnetic Resonance of Multiple Localized States in 1,4-Dibromonaphthalene Crystals," *J. Chem. Phys.* **63**, 1919 (1975).
8. K. A. Martin, G. Moller and A. M. Nishimura, "A Study of the Solvent Effects on the Lowest Triplet State of Hydroxybenzaldehydes," *J. Phys. Chem.* **80**, 2788 (1976).
9. G. R. Brunk, K. A. Martin and A. M. Nishimura, "A Study of Solvent Effects on the Phosphorescence Properties of Flavins," *Biophys. Jour.* **16**, 1373 (1976),

10. G. Moller and A. M. Nishimura, "Solvent and Substitution Effects on the Phosphorescence Properties of Several Purine Molecules," *J. Phys. Chem.* 81, 147 (1977).
11. D. A. Grainger and A. M. Nishimura, "Triplet State Energy Transfer in Several Proteins," *Biophys. Jour.* 20, 383 (1977).
12. Karen J. Latas and A. M. Nishimura, "Heavy Atom Effects on the Phosphorescent Triplet States of Several Aromatic Molecules," *J. Phys. Chem.*, 82, 491 (1978).
13. R. K. Power and A. M. Nishimura, "The Phosphorescent Triplet State of Several Cycloalkanones," *J. Photochem.* 8, 211 (1978).
14. Karen J. Latas and A. M. Nishimura, "Solvent Effects Upon the Phosphorescent Triplet States of Cyanopyridine and Pyridine Carboxaldehyde," *J. Photochem.* 9, 577 (1978).
15. D. L. Myers, G. R. Brunk, G. Moller and A. M. Nishimura, "Physical Binding of Benzanthracene with DNA by Optically Detected Magnetic Resonance," *J. Photochem.* 11, 249 (1979).
16. R. K. Power and A. M. Nishimura, "Microprocessor Controlled Photon Counter for Pulsed Optically Detected Magnetic Resonance," *Rev. Sci. Instru.* 50, 969 (1979).
17. Karen J. Latas, R. K. Power and A. M. Nishimura, "Solvent and Substituent Effects Upon the Phosphorescent Triplet States of Carbonyl Pyridines," *Chem. Phys. Lett.* 65, 272 (1979).
18. Karen J. Latas, Jean R. Simons and A. M. Nishimura, "Exciton Trapping in 1,4-Dihalonaphthalene Crystals," *J. Photochem.* 12, 161 (1980).
19. R. K. Power and A. M. Nishimura, "Microprocessor Controlled Pulse Train Generator for Pulsed Optically Detected Magnetic Resonance," *Rev. Sci. Instru.* 51, 1497 (1980).
20. K. A. Martin and A. M. Nishimura, "Coherence in the Phosphorescence Triplet State of Naphthalene in Dihalobenzenes," *Molec. Cryst. Liq. Cryst.* 88, 1 (1982).
21. K. A. Martin and A. M. Nishimura, "Optically Detected Magnetic Resonance of Organic Compounds Adsorbed on Alumina," Proceedings of the 4th. International Conference on Dynamical Processes in Excited States of Solids, in *J. Opt. Soc. Am. Oct.*, 1983.
22. R. K. Power and A. M. Nishimura, "Optically Detected Magnetic Resonance Saturation Techniques in the Study of Line Broadening," *Chem. Phys. Lett.* 98, 16 (1983).
23. S. G. Hilburn, R. K. Power, K. A. Martin and A. M. Nishimura, "Spin Relaxation in the Phosphorescent Triplet State of Several Pyridyl Carbonyl Compounds," *Chem. Phys. Lett.* 100, 429 (1983).

24. R. K. Power, K. A. Martin, D. G. Frank, and A. M. Nishimura, "The Study of the Phosphorescent Triplet State of Cycloalkanones by Pulse Optically Detected Magnetic Resonance," *J. Photochem.* 23, 335 (1983).
25. K. S. Law, P. N. Prasad, K. A. Martin and A. M. Nishimura, "Spin Coherence in Crystalline Complexes. Naphthalene: 2(1,4-Diodotetrafluorobenzene)," *Chem. Phys. Lett.* 103, 517 (1984).
26. D. G. Frank, K. A. Martin and A. M. Nishimura, "Optically Detected Magnetic Resonance of Several Aromatic Ketones Adsorbed on Alumina," *J. Phys. Chem.* 88, 2961 (1984).
27. N. J. Tro, K. A. Martin, K. E. Low, and A. M. Nishimura, "Localized States in Dichloronaphthalene Crystals," *J. Photochem.* 32, 303 (1986).
28. A. M. Nishimura, "Optically Detected Magnetic Resonance of Adsorbed Species on Sapphire," *J. Photochem.* 31, 1 (1986)
29. N. J. Tro, J. J. Tro, D. F. Marten, and A. M. Nishimura, "External Spin-Orbit Effects on the Phosphorescent Triplet State of Several Cycloalkanones," *J. Photochem.* 36, 141 (1986).
30. N. J. Tro, I. B. Searway, J. J. Tro, K. A. Martin, and A. M. Nishimura, "Dephasing of Electron Spin-Echo in the Triplet State of Orientationally Disordered Crystals," *Mol. Cryst. Liq. Cryst.* 140, 195 (1986).
31. K. E. Kihlstrom, K. A. Martin, and A. M. Nishimura, "Effect of Adsorption on Thin Silver Films on the Phosphorescent Triplet State of 4-Benzoylpyridine" *J. Phys. Chem.* 92 2932 (1988)
32. N. J. Tro, A. M. Nishimura and S. M. George " Interactions and Electronic Energy Transfer Between Molecules on Dielectric Surfaces: Phenanthrene on Al_2O_3 (1120)" *J. Vac. Sci. Tech.* A6 (3) May/Jun (1988)
33. N. J. Tro, A. M. Nishimura, D. R. Haynes, and S. M. George "Surface Nucleation in the Crystallization Kinetics of Phenanthrene Multilayers on Al_2O_3 (1120)" *Surf. Sci.* L961-L970 (1989).
34. N. J. Tro, A. M. Nishimura and S. M. George "Disorder-Order Transition and Energy Transfer in Phenanthrene Adlayers on Al_2O_3 (1120)", *J. Phys. Chem.* 93, 3276 (1989).
35. N. J. Tro, D. R. Haynes, A. M. Nishimura, and S. M. George "Coverage Dependent Electronic Absorption Spectrum of Pyrene on Al_2O_3 (1120)".*Chem. Phys. Lett.* 159, 599 (1989)
36. N. J. Tro, D. R. Haynes, A. M. Nishimura, and S. M. George, "Desorption Kinetics and Excimer Formation of Pyrene on Al_2O_3 (1120), *J. Chem. Phys.* 91, 5778 (1989)

37. B.E. Granger and A. M. Nishimura "A Photon Counter and Pulse Train Generator Interface for a PC Computer in Pulse Optically Detected Magnetic Resonance." *Rev. Sci. Instru.* 65, 366-369 (1994)
38. C.M.Aubuchon, B.S.Davison, A. M. Nishimura, and N.J.Tro "Thermal Desorption of Pentane on Al_2O_3 ", *J. Phys.Chem.* 98, 240-4 (1994).
39. A.M.Nishimura "A Review: Optically Detected Electron Spin Resonance in the Study of the Phosphorescent Triplet State of Biomolecules" in Trends In Photochem. Photobio. Vol 3 (1994) p. 581-632.
40. A.M.Nishimura "Optically Detected Electron Spin Resonance of Aromatic Ketones Adsorbed on Surfaces: Al_2O_3 Powder and Single Crystal, Ag Film and Molecular Crystals" Chapter 41 in Handbook of Surface Imaging and Visualization, A.T.Hubbard, ed., CRC Press (1995) p. 569-573.
41. Dina Bresenden, A.S.Carlson, P. Partain, G. Reynoso, Bobbie Oudinarath, K. A. Martin and A. M. Nishimura "Electronic Energy Transfer in Benzophenone Adlayer" *J. Fluor.* 5,377-381(1995)
42. K. Purvis, Staci Wiemelt, Tami Maras, Margaret Blue, Valery Melkonian, P. D. Ashby, Scott A. Riley, Leonard S. Fifield, K. A. Martin, and A. M. Nishimura "Dephasing of Spin-Echo in the Phosphorescent Triplet State of Crystalline 2-Indanone" *J. Lumin.* 71, 199-205 (1997).
43. Scott A. Riley, Leonard S. Fifield, Kristen Brubaker, Ian Rosbrugh, D. F. Marten, K. A. Martin, and A. M. Nishimura, "Detection of Multiple Trap Sites in α -Deuterated 2-Indanone by Optically Detected Magnetic Resonance", *J. Lumin.* 78 179-186(1998)
44. I.M.Rosbrugh, D. West, L.Pfeifer, N.M.Cook, D.M.Licata, K.A.Martin, and A.M.Nishimura "Crystallization Kinetics of Benzophenone and Naphthalene Multilayers on $\text{Al}_2\text{O}_3(0001)$ ", *Surf. Sci.* 449, 248-254 (2000).
45. D.Saiki and A.M.Nishimura "Dynamics of Crystal Formation by Optical Detection: benzophenone, naphthalene- h_8 , and $-\text{d}_8$ multilayers on $\text{Al}_2\text{O}_3(0001)$ ", Encyclopedia of Surface and Colloid Science, A.T.Hubbard, editor. Marcel Dekker, N.Y., N.Y. (2002).
46. R.T.Gingerich, D.L.Arnold, K.A.Martin and A.M.Nishimura "Interaction of Water and p-Dibromobenzene on $\text{Al}_2\text{O}_3(0001)$ " *J. Undergrad. Chem. Res.* 1, 173-177 (2002).
47. J.A.Santos, J.D.Taylor, R.T.Gingerich, A.F.Cavallero, M.P.Hanchett, K.R.Pointer, A.S.Pontius, D.L.Arnold, A.M.Nishimura, C.Sharpe, K.A.Martin "Dynamics of Crystal Formation by Optical Detection", Encyclopedia of Surface and Colloid Science, A.T.Hubbard, editor. 2nd Edition. Marcel Dekker, N.Y., N.Y. (2003).
48. T. LeDoux, J. Brigham, K.A. Martin and A.M.Nishimura "Crystallization Kinetics of Cycloalkanone Thin-Films on $\text{Al}_2\text{O}_3(0001)$ ", *J. Undergrad. Chem. Res.* 2. 135-139 (2003)

49. Brooke Haddock, Lindsay Meiling, Stephanie Cowell, K.A.Martin, and A.M.Nishimura "Formation of Molecular Clusters by Percolation of Water Through p-Bromochlorobenzene Adlayer on Al₂O₃(0001)", *Surf. Sci.* 569, 56-61 (2004).
50. J.S. Brigham, A.J. Bishop, T.S. LeDoux, J.M. Rea, K. A. Martin and A. M. Nishimura "Use of Optical Interference to Determine Surface Coverage During Vacuum Deposition", submitted to *J. Undergrad. Chem. Res.*
51. J.S. Brigham, A.J. Bishop, K.A. Martin, A.M. Nishimura, "Dynamics of Disorder-to-Order Transition in Bilayers: Formation of van der Waals Molecular Clusters by Percolation of p-Difluorobenzene through Water Adlayer on Al₂O₃(0001)" submitted to *J. Undergrad. Chem. Res.*
52. B.J. Haddock, S.L. Cowell, J.S. Brigham, T. S. LeDoux, J.G. Andre, C.A. Moore, E. Herndon, E.J. Neethling, C. Osborn, A.J. Bishop, L. Meiling, K.A. Martin and A.M. Nishimura "Dynamics of Disorder-to-Order Transition in Bilayers: Formation of van der Waals Molecular Clusters by Percolation of Water Through p-Dihalobenzene Adlayer on Al₂O₃(0001)" submitted to Encyclopedia of Surface and Colloid Science, A.T.Hubbard, editor.

Papers in review (undergraduate co-authors underlined):

T. S. LeDoux, J. M. Rea, K.A. Martin and A.M. Nishimura "Temperature Dependent Non-radiative Effects in the Disorder-to-Order Transition in Cyclopentanone and Cyclohexanone Films on Al₂O₃(0001)" submitted to *Thin Solid Films*

Papers in preparation (undergraduate co-authors underlined):

Kristi Lazar, Carrie Stein, D.F.Martin and A.M.Nishimura "ODMR of *cis* and *trans* Isomers of α,α' -Deuterated 2-Indanone" to be submitted to *J. Lumin.*

Recent Papers Presented - Oral and Posters (undergraduate co-authors underlined):

Scott A. Riley and A.M.Nishimura "An Inexpensive Photon Counter Interface for the Personal Computer" ACS Undergraduate Research Conference UCSB, Santa Barbara, CA 1996

Scott A. Riley, N.R.Franklin, B. Oudinarath, S. Wong, D. Congalton, and A.M.Nishimura "Measurement of Evaporation Rates of Organic Liquids by Optical Interference" ACS Undergraduate Research Conference UCSB, Santa Barbara, CA 1996.

Scott A. Riley, Peter Kooiman, Donald Sirbuly, R. Kent Power, K.A.Martin, and A.M. Nishimura “Determination of Spin Relaxation Times by Real Time Spin Echo” 44th Annual Western Spectroscopy Association Conference Pacific Grove, CA January, 1997.

Scott A. Riley, Leonard S. Fifield, Makoto Masuno, K.A.Martin and A.M.Nishimura “Identification of Partially Deuterated 2-indanone by ODMR” 44th Annual Western Spectroscopy Association Conference Pacific Grove, CA January, 1997.

Peter Kooiman, Donald Sirbuly, S.A. Riley, K. A. Martin and A.M.Nishimura “Determination of Transverse Relaxation Times from Real Time Spin Echo” ACS-Los Padres Section Meeting, March 1, 1997, Santa Barbara.

Leonard S. Fifield, S.A.Riley, K.A.Martin and A.M. Nishimura “Investigation of Acid-Catalyzed Exchange Deuteration of 2-Indanone Using ODMR” ACS-Los Padres Section Meeting, March 1, 1997, Santa Barbara.

Douglas Jones, Christopher Cooke, Leonard Fifield, Donald Sirbuly, Scott Riley and A.M.Nishimura “Fluorescence Spectrum of Naphthalene Adlayer on Al₂O₃” Westmont College, Student Research Symposium, Santa Barbara, April 1997.

Leonard Fifield, Scott Riley and A.M.Nishimura “Investigation of Acid-Catalyzed Exchange Deuteration of 2-Indanone”, Westmont College, Student Research Symposium, Santa Barbara, April 1997

Peter Kooiman, Donald Sirbuly, Scott A. Riley, K.A.Martin, and A.M.Nishimura “Determination of Transverse Relaxation Times from Real-Time Spin-Echo”, Westmont College, Student Research Symposium, Santa Barbara, April 1997

Ian Rosbrugh, S. Y. Nishimura, Scott Riley, L. S. Fifield, B. Lamarche and A.M.Nishimura “Evaporation Rates of Short Chain Alcohols by Optical Interference” Western Spectroscopy Association 45th Annual Meeting, Pacific Grove, CA Jan 28-30, 1998.

S.A.Riley, L. S. Fifield, K.A.Martin, and A.M.Nishimura, “Detection of Multiple Trap Sites in Deuterated 2-Indanone Using ODMR” Western Spectroscopy Association 45th Annual Meeting, Pacific Grove, CA Jan 28-30, 1998.

Ian Rosbrugh, S. Y. Nishimura, Scott Riley, L. S. Fifield, B. Lamarche and A.M.Nishimura “Evaporation Rates of Short Chain Alcohols by Optical Interference” Westmont College, 2nd Annual Student Research Symposium, Santa Barbara, April 1998.

S.A.Riley, L. S. Fifield, K.A.Martin, and A.M.Nishimura, “Detection of Multiple Trap Sites in Deuterated 2-Indanone Using ODMR” Westmont College, 2nd Annual Student Research Symposium, Santa Barbara, April 1998.

S.A.Riley, A. Noble, J. Crabb, T. Walkup, D. Jones, and A.M.Nishimura “A Variation of the Speed of Sound Experiment” Westmont College, 2nd Annual Student Research Symposium, Santa Barbara, April 1998.

Ian Rosbrugh, S. Y. Nishimura and A.M.Nishimura, “Measurement of Evaporation Rates of Short-Chain Alcohols by Optical Interference” ACS-Southern California Undergraduate Research Conference , Cal Poly San Luis Obispo, April 1998.

Leonard S. Fifield, S.A.Riley, K.A.Martin, and A. M. Nishimura “A Program to Determine the Percent Total Deuteration in an Exchange Reaction” ACS-Southern California Undergraduate Research Conference , Cal Poly San Luis Obispo, April 1998.

Ian Rosbrugh, L. Pfeifer, D.W.West, K.A. Martin and A.M.Nishimura, “Energy Transfer in Benzophenone/Naphthalene Bilayer on Al₂O₃ (0001)” 46th Annual Conference of the Western Spectroscopy Association, Pacific Grove, CA , Jan. 1999.

Ian Rosbrugh, L. Pfeifer, D. W. West, and A. M. Nishimura, “Energy Transfer in Organic Bilayers on Al₂O₃ (0001)” 3rd Annual Westmont College Student Research Symposium, Santa Barbara, April 1999.

David Saiki and A.M.Nishimura “Crystallization Kinetics of Naphthalene-h₈ and -d₈ on Al₂O₃ (0001)” 47th Annual Meeting of the Western Spectroscopy Association, Pacific Grove, CA Jan 2000.

Kristi Lazar, D. Aldrich, D.F. Marten and A.M.Nishimura, “Optically Detected Magnetic Resonance of Partially Deuterated 2-Indanone”, 47th Annual Meeting of the Western Spectroscopy Association, Pacific Grove, CA Jan 2000.

David Saiki and A.M.Nishimura “Crystallization Kinetics of Naphthalene-h₈ and -d₈ on Al₂O₃ (0001)” ACS Southern California Undergraduate Research Conference, Occidental College, Los Angeles, CA April 2000.

Kristi Lazar, D. Aldrich, D.F. Marten and A.M.Nishimura, “Optically Detected Magnetic Resonance of Partially Deuterated 2-Indanone”, ACS Southern California Undergraduate Research Conference, Occidental College, Los Angeles, CA April 2000.

David Saiki and A.M.Nishimura “Crystallization Kinetics of Naphthalene-h₈ and -d₈ on Al₂O₃ (0001)” 4th Annual Westmont College Student Research Symposium, Santa Barbara, April 2000.

Kristi Lazar, D. Aldrich, D.F. Marten and A.M.Nishimura, “Optically Detected Magnetic Resonance of Partially Deuterated 2-Indanone”, 4th Annual Westmont College Student Research Symposium, Santa Barbara, April 2000

Bethany Greene, Warren Johnson, Kristi Lazar, D.F.Marten, and A. M.Nishimura
“Optically Detected Magnetic Resonance of α -Deuterated 2-Indanone” 48th Annual
Western Spectroscopy Association Conference, Asilomar Pacific Grove, CA Jan 2001

K.A.Martin , Carolyn Sharpe, R.T.Gingerich, M.P.Hanchett,K.R.Pointer, A.F.Cavallero,
A.M.Nishimura “Multiple Disorder-to-Order Transitions of Cycloalkanone Multilayers on
 $\text{Al}_2\text{O}_3(0001)$ 48th Annual Western Spectroscopy Association Conference, Asilomar
Pacific Grove, CA Jan 2001

Bethany Greene, Warren Johnson, Kristi Lazar, D.F.Marten and A.M.Nishimura
“Optically Detected Magnetic Resonance of α -Deuterated 2-Indanone” 20th Annual
Southern California American Chemical Society Undergraduate Research Conference,
Westmont College, Santa Barbara, CA , April 2001

David Licata, A. Cavallero, K.Pointer,D.J.Saiki, K.A.Martin, and A.M.Nishimura,
“Crystallization Kinetics of Benzophenone, Naphthalene-h₈ and d₈ Multilayers on
 $\text{Al}_2\text{O}_3(0001)$ ”, 20th Annual Southern California American Chemical Society
Undergraduate Research Conference, Westmont College, Santa Barbara, CA , April
2001.

Bethany Greene, Warren Johnson, Kristi Lazar, D.F.Marten and A.M.Nishimura
“Optically Detected Magnetic Resonance of α -Deuterated 2-Indanone” 5th Annual
Westmont College Student Research Symposium, Santa Barbara, April 2001

David Licata, A. Cavallero, K.Pointer,D.J.Saiki, K.A.Martin, and A.M.Nishimura,
“Crystallization Kinetics of Benzophenone, Naphthalene-h₈ and d₈ Multilayers on Al_2O_3
(0001) ”, 5th Annual Westmont College Student Research Symposium, Santa Barbara,
April 2001

Katie Pointer, Matthew Hanchett, A. Cavallero, David Licata, K.A.Martin and
A.M.Nishimura “Crystallization Kinetics of Cyclopentanone on $\text{Al}_2\text{O}_3(0001)$ 20th Annual
Southern California American Chemical Society Undergraduate Research Conference,
Westmont College, Santa Barbara, CA , April 2001

Adam Cavallero, Matthew P. Hanchett, R. T. Gingerich, Katie R. Pointer, Carolyn J.
Sharpe, K.A. Martin and A. M. Nishimura “Multiple Disorder-to-Order Transitions of
Cycloalkanone Multilayers on $\text{Al}_2\text{O}_3(0001)$ 37th American Chemical Society Western
Regional Meeting, Fess Parker’s Doubletree Resort, Santa Barbara, CA, Oct 2001.

Bethany Greene, Warren Johnson, Kristi Lazar, D.F.Marten and A.M.Nishimura
“Optically Detected Magnetic Resonance of α -Deuterated 2-Indanone” 37th American
Chemical Society Western Regional Meeting, Fess Parker’s Doubletree Resort, Santa
Barbara, CA, Oct 2001

Bethany Greene, Warren Johnson, Kristi Lazar, D.F.Marten and A. M. Nishimura
“Optically Detected Magnetic Resonance of α -Deuterated 2-Indanone” 49th Annual
Western Spectroscopy Association Conference, Asilomar Pacific Grove, CA Jan 2002

Carolyn Sharpe, K.A.Martin, R.T.Gingerich, M.P.Hanchett, K.R.Pointer, A.F.Cavallero
“Multiple Disorder-to-Order Transitions of Cycloalkanone Multilayers on $\text{Al}_2\text{O}_3(0001)$ ”
49th Annual Western Spectroscopy Association Conference, Asilomar Pacific Grove,
CA Jan 2002.

Bethany Greene, Warren Johnson, Kristi Lazar, D.F.Marten and A.M.Nishimura
“Optically Detected Magnetic Resonance of α -Deuterated 2-Indanone” 6th Annual
Westmont College Student Research Symposium, Santa Barbara, April 2002

J.D.Taylor, J.A.Santos, A. Pontius and A.M.Nishimura, “Crystallization Kinetics of
Benzophenone, Naphthalene- h_8 and d_8 Multilayers on $\text{Al}_2\text{O}_3(0001)$ ”, 6th Annual
Westmont College Student Research Symposium, Santa Barbara, April 2002

Bethany Greene, D.F.Marten, A.M.Nishimura “Optically Detected Magnetic Resonance
of Several α -Deuterated 2-Indanone” Southern California Undergraduate Research
Conference in Chemistry and Biochemistry, California State University Northridge,
Northridge, CA April 2002.

J.D.Taylor, J.A.Santos, R.T.Gingerich, C.J.Sharpe, K.A.Martin and A.M.Nishimura
“Multiple Disorder-to-Order Phase Transitions of Cycloalkanone Multilayers on
 $\text{Al}_2\text{O}_3(0001)$ ” Southern California Undergraduate Research Conference in Chemistry
and Biochemistry, California State University Northridge, Northridge, CA April 2002

C.J. Sharpe, K. A. Martin, J. D. Taylor, A. S. Pontius, and A. M. Nishimura “Multiple
Disorder-to-Order Phase Transitions of Large-Ringed Cycloalkanones
on $\text{Al}_2\text{O}_3(0001)$ ” 50th Annual Western Spectroscopy Association Conference,
Asilomar Pacific Grove, CA Jan 2003

Joseph D. Taylor, Amanda S. Pontius, Jerome A. Santos, R.T.Gingerich, D. L. Arnold,
K.A. Martin and A. M. Nishimura, “Interaction of Water and p-Dihalobenzenes on
 $\text{Al}_2\text{O}_3(0001)$ ” 50th Annual Western Spectroscopy Association Conference, Asilomar
Pacific Grove, CA Jan 2003

Brooke Haddock, Stephanie Cowell, Amanda Pontius, Joseph Taylor, Jerome Santos
and A.M.Nishimura, “Interaction of Water and p-Dichlorobenzene on $\text{Al}_2\text{O}_3(0001)$ ”.
2003 Southern California Undergraduate Research Conference, Cal Lutheran
University Apr.12, 2003

Jonathan Brigham, T. LeDoux, K.A. Martin and A.M.Nishimura, “Disorder-to-order
transition by cavity ringdown spectroscopy”, 51st Annual Western Spectroscopy
Association Conference, Asilomar Pacific Grove, CA Jan 28-30, 2004

B. Haddock, S. Cowell, L. Meiling, K.A.Martin and A.M.Nishimura, “Water-p-
dichlorobenzene clusters on $\text{Al}_2\text{O}_3(0001)$ ” 51st Annual Western Spectroscopy
Association Conference, Asilomar Pacific Grove, CA Jan 28-30, 2004

T. LeDoux and J. Brigham, “Observation of disorder-to-order transformation in
cyclohexanone on $\text{Al}_2\text{O}_3(0001)$ by cavity ringdown laser spectroscopy”, 8th Annual

Westmont College Undergraduate Research Symposium, Westmont College, Apr 21, 2004.

B. Haddock and S. Cowell, "Formation of molecular clusters by percolation of water through p-bromochlorobenzene on $\text{Al}_2\text{O}_3(0001)$ ", 8th Annual Westmont College Undergraduate Research Symposium, Westmont College, Apr 21, 2004.

J. Brigham and A. Bishop, "Water-p-difluorobenzene molecular clusters by percolation on $\text{Al}_2\text{O}_3(0001)$ ", 52nd Annual Western Spectroscopy Association Conference, Asilomar Pacific Grove, CA Jan, 2005

T. LeDoux and J. Rea "Non-radiative processes in cycloalkanone thin films on $\text{Al}_2\text{O}_3(0001)$ " 52nd Annual Western Spectroscopy Association Conference, Asilomar Pacific Grove, CA Jan, 2005

Undergraduate students who are co-authors of published manuscripts with Nishimura.

1. Douglas. G. Frank (B.S.1983), Ph.D. with Professor Arthur T. Hubbard at the Univ. of Cincinnati. Currently, research scientist at the Surface Science Center of the University of Cincinnati; entrepreneur: scientific instrumentation developed in laboratory to probe surfaces.
2. Karen. E. (Patrick) Low (B.S. 1984). Taught science for several years at Cuyama High School in New Cuyama, CA. Currently a high school science teacher in Riverside, CA.
3. Nivaldo J. Tro (B.S. 1985), Ph.D. with Professor S. George, Stanford University, postdoctoral fellow with Professor C.B.Harris, University of California, Berkeley. Currently a professor of chemistry at Westmont College.
4. Margaret A. Blue (B.S. 1988) MS in biomedical engineering from Arizona State University.
5. Valery (Enslow) Melkonian (B.S. 1989) Currently on missionary service with Operation Mobilization in Africa.
6. Peter J. Partain (B.S. 1990) MS in chemical engineering from UCLA. Currently a staff engineer at Exxon in Los Angeles, CA.
7. Staci (Phillips) Wiemelt (B.S. 1993) Completed residency in veterinary medicine at the University of Pennsylvania; currently in private practice.
8. Christopher M.Aubuchon (B.S. 1994) Completed the doctoral program in chemistry at Stanford University working with Professor M.D. Fayer; currently CEO for Exajoule.

9. Dina Bresenden (B.S. 1994) Worked at the Children's Hospital in Los Angeles, CA, Now is medical school in the east coast.
10. A. Scott Carlson (B.S. 1994) Currently employed at Apple Computers, San Jose, CA.
11. Kathleen Purvis (B.S. 1995) Completed her doctoral degree in chemistry at Princeton University working with Professor S.L. Bernasek; currently an assistant professor of chemistry at Joint Sciences-Claremont McKenna College
12. David Congalton (B.S. 1995) Completed dentistry program in Omaha Nebraska.
13. Paul Ashby (B.S. 1996) Completed the doctoral program at Harvard; completed post doctoral work at Harvard.
14. Sally Wong (B.S. 1996) Received MS in chemistry from University of Colorado and divinity degree from Fuller Theological Seminary; currently a pastor.
15. Scott A. Riley (B.S. 1997) Completed the Ph.D. in chemistry at University of California, Davis with Matt Augustine; working as an analytical chemist in Wyoming.
16. Nathan R. Franklin (B.S. 1997) Completed Ph.D. at Stanford University, with Dr. H. Dai; postdoctoral fellow at UC Santa Barbara.
17. Peter Kooiman (B.S. 1997) High school chemistry teacher in San Bernadino County.
18. Alison Noble (B.S. 1997) Completed the Ph.D. at the University of Illinois, Champaign-Urbana; post doctoral work in Washington.
19. Donald Sirbully (B.S. 1998) Finished graduate student at University of California at Santa Barbara with Dr. Steve Buratto; post doctoral fellow at U C Berkeley
20. Christopher Cook (B.S. 1998) Currently working in student missions along the east coast.
21. Douglas Jones (B.S. 1998) Instructor in chemistry in the air force.
22. Ian Rosbrugh (B.S. 1999) Completed M.D. program at Loma Linda University.
23. David W. West (B.A 2001) Completed 3-2 program in chemical engineering at University of California Berkeley.
24. David Saiki (B.S. 2000) Completing Ph.D. program at UC Davis in the fall.
25. Laurel E. Pfeifer (B.S. 2000) graduate student in biology in Oregon.
26. David M. Lacata (B.S. 2002) Teaching chemistry in high school.
27. Nicole M. Cook (B.S. 2002). Instructor in chemistry at Westmont College, '02-'03. In medical program at Loma Linda Medical School.

28. Adam Cavallero (B.A. 2002) Medical school at Loma Linda University.
29. Katie Pointer (B.S. 2003) Instructor in chemistry 2003-2004; graduate program in education, Univ. Calif. Santa Barbara
30. Kristi Lazar (B.S. 2001) Currently in Ph.D. program at Univ. of Chicago.
31. Bethany Greene (B.S. 2002) chemistry teacher in high school in Thousand Oaks.
32. Warren Johnson (B.S. 2002) medical school.
33. Matthew P. Hanchett (B.S. 2003) medical school.
34. Tyler Conant (B.S. 2002) works at Raytheon as computer programmer.
35. Tristan Gingerich (B.S. 2003) working at father's business.
36. Daniel Arnold (B.S. 2003) in construction; applying for graduate program in chemistry.
37. Tyler P. Ludwick (B.S. 2003) in agricultural chemistry program at UC Davis
38. Jerry A. Santos (B.S. 2004) working in an analytical lab in San Diego.
39. Joseph D.T aylor (B.S. 2004) in doctoral program at UC Riverside.
40. Amanda S. Pontius (B.S. 2004) in doctoral program at Univ. of Hawaii.
41. Brooke J. Haddock (B.S. 2004) in doctoral program at Univ. of S. Carolina.
42. Christopher D. Emerson (B.S. 2004) in medical school
43. Andrew D. Ribbens (B.S. 2004) in construction.
44. Aaron Nudleman (B.S. 2004) in doctoral program at Univ. Washington.
45. Stephanie L. Cowell (B.S. 2004) high school chemistry teacher in Monterey.
46. Janeé G. André (B.S. 2004) chemistry instructor, Westmont College '04-'05.
45. Carrie A. Moore (B.S. 2004) research assistant at biotech firm in southeast.
47. Elizabeth J. Neethling (B.S. 2004) education program at Sacramento State Univ.
48. Robert Broadus (B.S. 2004) working for a computer firm in Santa Barbara
49. Dustin Carroll (B.S. 2004) working for a computer firm in San Louis Obispo.
50. Lindsay Meiling (B.S. 2005)

51. Emily Herndon (B.S. 2005)
52. Christopher Osborn (B.S. 2005)
53. Jonathan S. Brigham (B.S. 2005)
54. Timothy S. LeDoux (B.S. 2005)
55. Adam J. Bishop (B.S. 2006)
56. Jonathan M. Rea (B.S. 2006)